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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,698	03/26/2001	David F. May	AEI0006.US	9281
7590 01/21/2005			EXAMINER	
Todd T. Taylor TAYLOR & AUST, P.C. 142 S. Main St. P.O. Box 560 Avilla, IN 46710			COOLEY, CHARLES E	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,698

Applicant(s)

MAY ET AL.

Examiner

Charles E. Cooley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42, 44 and 45 is/are pending in the application.
- 4a) Of the above claim(s) 2, 7, 24-29 and 37-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6, 8-23, 30-36, 44 and 45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-45 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. This application remains assigned to Technology Center 1700, Art Unit 1723 and the following will apply for this application:

Please direct all written correspondence with the correct application serial number for this application to Art Unit 1723.

Telephone inquiries regarding this application should be directed to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 or to the Examiner at (571) 272-1139. All official facsimile should be transmitted to (703) 872-9306.

Election/Restriction

2. Applicant's election of the species of Fig. 34 in Paper No. 4 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP 818.03(a))

3. Claims 2, 7, 24-29, and 37-42 are thereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 4.

Priority

4. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 119(e).

Specification

5. The title and amended abstract are acceptable.

Double Patenting

6. The terminal disclaimer filed 20 OCT 2003 has been approved and the double patenting rejection is therefore withdrawn.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
9. **Claims 1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 30, 31, 32, 33, 34, 35, 36, 44, and 45 are rejected under 35 U.S.C. 103(a) as being**

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unpatentable over Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and McCann (US 2,427,733) and Franz (US 5,609,761).

Penny (US 5,904,841) discloses a centrifuge apparatus comprising a filter head 101; a housing 14 connected to the filter head; a rotatable filter 12 disposed within the housing; the filter having an inlet 105 and an outlet 108; reaction drive 18; venturi vacuum device 112 in the filter head; check valve 125; engine 51; and fixed shaft 107. Penny (US 5,904,841) does not disclose the electric motor drive, controller, or spirally arranged and embossed filter media. The patent to Vado et al. (US 5,656,164) discloses a centrifuge apparatus comprising a filter head 14; a housing 2 connected to the filter head 14; a rotatable filter 9 disposed within the housing; the filter having an inlet 12 and an outlet 7; inherently replaceable filter media 11 for improving the filtering efficiency of the solids constituent from the feed fluid; electric motor drive 3 carried by the filter head with a rotatable output shaft 6 coupled with the filter for rotating the filter; and speed controller 17, 18. The patent to McCann discloses a filtering apparatus used for filtering oil wherein the filter is intended to be coupled to an engine for filtering oil contained in the engine (col. 1, lines 1-5), the filtering apparatus including housing 50 with a centertube 32 therein; a replaceable filter media 14 (col. 2, lines 10-16) wrapped around the centertube; the filter media 14 being spirally arranged as shown at 70 in Fig. 2. The patent to Franz teaches a filter media 1 including an embossed sheet 2 having concave dimples 3' (Figs. 1, 2, 6, and 7). It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have substituted the drive in Penny with an electric motor drive controlled by a speed controller as

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disclosed by Vado et al. for the purpose of positively driving the filter at a selected speed as opposed to unreliable reaction drive which is not speed controllable (col. 2, lines 13-15 and 50-52 and col. 3, line 5) and to have provided Penny with a replaceable spirally arranged filter media in the filter as disclosed by McCann for the purpose of providing an economical and efficient media for trapping solids in the filter assembly and to increase the density of the filtering material in the filter (col. 1, lines 29-33 and col. 4, lines 23-29) and to have provided the filter media in the form of an embossed sheet having dimples as disclosed by Franz for the purpose of spacing layers of the filter media apart to maintain proper distances between the layers to prevent decreasing the filter surface and filter media efficiency and to prevent increased pressure losses (col. 1, lines 6-52; col. 2, lines 8-16; col. 4, lines 11-26; and col. 5, lines 8-32). Moreover, since the filter media of Franz allows passage of materials of particular sizes there through (i.e., to provide the intended filtering function), the filter media of Franz is deemed to inherently possess a multitude of holes therein (to allow passage of said materials) wherein the dimples 3' are necessarily disposed proximate at least some the holes.

With respect to claim 33, Penny does not show the filter attached to the engine. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have attached the filter to the engine, e.g., to form an integrated assembly, since it has been held that rearranging parts of an invention which rearrangement does not modify the operation of the device involves only routine skill in the art. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) and MPEP 2144.04.

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10. Claims 1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 30, 31, 32, 33, 34, 35, 36, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and Brownell (US 4,877,527) and Franz (US 5,609,761).

Penny (US 5,904,841) discloses a centrifuge apparatus comprising a filter head 101; a housing 14 connected to the filter head; a rotatable filter 12 disposed within the housing; the filter having an inlet 105 and an outlet 108; reaction drive 18; venturi vacuum device 112 in the filter head; check valve 125; engine 51; and fixed shaft 107. Penny (US 5,904,841) does not disclose the electric motor drive, controller, or spirally arranged and embossed filter media. The patent to Vado et al. (US 5,656,164) discloses a centrifuge apparatus comprising a filter head 14; a housing 2 connected to the filter head 14; a rotatable filter 9 disposed within the housing; the filter having an inlet 12 and an outlet 7; inherently replaceable filter media 11 for improving the filtering efficiency of the solids constituent from the feed fluid; electric motor drive 3 carried by the filter head with a rotatable output shaft 6 coupled with the filter for rotating the filter; and speed controller 17, 18. The patent to Brownell discloses a filtering apparatus used for filtering oil wherein the filter is intended to be coupled to an engine for filtering oil contained in the engine (col. 2, lines 12-23), the filtering apparatus including housing (col. 2, lines 16-17) with a centertube 12 therein; a replaceable filter media 16 wrapped around the centertube; the filter media 16 being spirally arranged as shown in Fig. 1. The patent to Franz teaches a filter media 1 including an embossed sheet 2 having concave dimples 3' (Figs. 1, 2, 6, and 7). It would have been obvious to one having

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ordinary skill in the art, at the time applicant's invention was made, to have substituted the drive in Penny with an electric motor drive controlled by a speed controller as disclosed by Vado et al. for the purpose of positively driving the filter at a selected speed as opposed to unreliable reaction drive which is not speed controllable (col. 2, lines 13-15 and 50-52 and col. 3, line 5) and to have provided Penny with a replaceable spirally arranged filter media in the filter as disclosed by Brownell since Brownell teaches that spirally wound filtering media wound about a centertube is a well known filtering arrangement and for the purpose of providing an economical media for trapping solids in the filter assembly and to increase the surface area of the filtering material presented to the liquid (col. 1, lines 6-13 and lines 57-61) and to have provided the filter media in the form of an embossed sheet having dimples as disclosed by Franz for the purpose of spacing layers of the filter media apart to maintain proper distances between the layers to prevent decreasing the filter surface and filter media efficiency and to prevent increased pressure losses (col. 1, lines 6-52; col. 2, lines 8-16; col. 4, lines 11-26; and col. 5, lines 8-32). Moreover, since the filter media of Franz allows passage of materials of particular sizes there through (i.e., to provide the intended filtering function), the filter media of Franz is deemed to inherently possess a multitude of holes therein (to allow passage of said materials) wherein the dimples 3' are necessarily disposed proximate at least some the holes.

With respect to claim 33, Penny does not show the filter attached to the engine. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have attached the filter to the engine, e.g., to form an integrated

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assembly, since it has been held that rearranging parts of an invention which rearrangement does not modify the operation of the device involves only routine skill in the art as explained above.

11. Claims 1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 30, 31, 32, 33, 34, 35, 36, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and Drori (US 5,174,895).

Penny (US 5,904,841) discloses a centrifuge apparatus comprising a filter head 101; a housing 14 connected to the filter head; a rotatable filter 12 disposed within the housing; the filter having an inlet 105 and an outlet 108; reaction drive 18; venturi vacuum device 112 in the filter head; check valve 125; engine 51; and fixed shaft 107. Penny (US 5,904,841) does not disclose the electric motor drive, controller, or spirally arranged and embossed filter media. The patent to Vado et al. (US 5,656,164) discloses a centrifuge apparatus comprising a filter head 14; a housing 2 connected to the filter head 14; a rotatable filter 9 disposed within the housing; the filter having an inlet 12 and an outlet 7; inherently replaceable filter media 11 for improving the filtering efficiency of the solids constituent from the feed fluid; electric motor drive 3 carried by the filter head with a rotatable output shaft 6 coupled with the filter for rotating the filter; and speed controller 17, 18. The patent to Drori teaches a filter media 10 or 192 that may be disposed about a centertube 254. The filter media 10 or 192 is spirally arranged about the centertube or an axis and includes an embossed sheet 180 having

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dimples 184 (Figs. 1, 7, 7B, and 10). It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have substituted the drive in Penny with an electric motor drive controlled by a speed controller as disclosed by Vado et al. for the purpose of positively driving the filter at a selected speed as opposed to unreliable reaction drive which is not speed controllable (col. 2, lines 13-15 and 50-52 and col. 3, line 5) and to have provided Penny with a replaceable spirally arranged embossed filter media with dimples as disclosed by Drori for the purpose of providing a large filter surface area in a small physical area and to ensure proper spacing between layers of the filter media (col. 1, lines 24-60; col. 6, lines 16-29; col. 7, lines 6-12; and Figs. 1 and 7-7B). Moreover, since the filter media of Drori allows passage of materials of particular sizes there through (i.e., to provide the intended filtering function - see col. 4, lines 15-28), the filter media of Drori is deemed to inherently possess a multitude of holes therein (to allow passage of said materials) wherein the dimples 184 are necessarily disposed proximate at least some the holes.

With respect to claim 33, Penny does not show the filter attached to the engine. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have attached the filter to the engine, e.g., to form an integrated assembly, since it has been held that rearranging parts of an invention which rearrangement does not modify the operation of the device involves only routine skill in the art as explained above.

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12. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and McCann (US 2,427,733) and Franz (US 5,609,761) OR Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and Brownell (US 4,877,527) and Franz (US 5,609,761) OR Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and Drori (US 5,174,895) as applied to claim 14 above, and further in view of Simonds (US 4,353,499).

Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and McCann (US 2,427,733) and Franz (US 5,609,761) or Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and Brownell (US 4,877,527) and Franz (US 5,609,761) or Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and Drori (US 5,174,895) do not disclose the recited pressure reducing device. The patent to Simonds discloses in Figure 1 a centrifuge apparatus coupled to an engine for filtering oil contained in the engine (col. 1, lines 10-19 and 30-37; col. 4, lines 35-47) and comprising a filter head 22; a stationary housing 12 connected to the filter head; a rotatable filter 42 disposed within the housing; the filter having an inlet 96 and an outlet 112; replaceable (col. 5, lines 8-27) filter media 68, 78, 82, 86 which increases a filtration surface area and therefore improves the filtering efficiency of the solids constituent from the feed fluid (Col. 4, lines 4-20); electric motor drive 56 carried by the filter head with a rotatable output shaft 54 coupled with the filter for rotating the filter; and a flow restrictor pressure reducing device 34. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have provided Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and McCann (US 2,427,733) and Franz (US

5,609,761) or Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and Brownell (US 4,877,527) and Franz (US 5,609,761) or Penny (US 5,904,841) in view of Vado et al. (US 5,656,164) and Drori (US 5,174,895) with a pressure reducing device as disclosed by Simonds for the purpose controlling the flow of fluid (oil) into the filter assembly (col. 4, lines 47-49).

Response to Amendment

13. Applicant's arguments with respect to the pending claims have been considered but are deemed to be moot in view of the new grounds of rejection necessitated by the amendment filed 15 OCT 2004.. To provide filter media (which may be spirally arranged) with in the form of embossed sheets with dimples (a "dimple" being defined broadly as a "surface depression") is prima facie obvious as evidenced by the applied prior art. To provide spirally arranged filter media with in the form of embossed sheets is prima facie obvious as evidenced by the cited but not applied prior art to Wisted et al. and Barger et al. The claims thus fail to define patentable subject matter.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited prior art to Wisted et al. teaches spirally wound filter media with embossing (col. 8, lines 14-29). Barger et al. teaches spirally wound and embossed sheets of filter media.

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Charles" followed by a stylized flourish.

Charles E. Cooley
Primary Examiner
Art Unit 1723

19 JAN 2005